UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
DUONG, THOMAS

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 01/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/661,030	PAGE ET AL.
	Examiner	Art Unit	
	Thomas Duong	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _13 October 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-17, 19-43, 45-69, 71-95 and 97-104_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-9, 11-13, 15-17, 19-22, 26-35, 37-39, 41-43, 45-48, 52-61, 63-65, 67-69, 71-74, 78-87, 89-91, 93-95, 97-100 and 104._ is/are rejected.

7)☒ Claim(s) _10, 14, 23-25, 36, 40, 49-51, 62, 66, 75-77, 88, 92 and 101-103_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This office action is in response to the amendment filed on October 13, 2004. The

amendment filed on October 13, 2004 has been entered and made of record. *Claims 1-*

17, 19-43, 45-69, 71-95 and 97-104 are presented for further consideration and

examination.

Response to Argument

2.   The Applicants' arguments, see pg.2, para.1, filed on October 13, 2004 have been fully

considered and are persuasive. The previous final rejection has been withdrawn.

3.   With regard to <u>claims 1, 27, 53 and 79</u>, the Applicants point out that:

- *The applied art is not seen to disclose or to suggest the foregoing arrangement,*

    particularly as regards monitoring for issuance of an update message from a

    directory server indicating that a directory entry has been updated, obtaining in a

    case where the update message is issued the updated directory entry by using a

    second communication protocol that differs from a first communication protocol,

    extracting updated data therefrom, and sending the updated data to a network

    device for placement into its corresponding information.

    However, the Examiner finds that the Applicants' arguments are not persuasive and

    maintains that the Lautmann reference does disclose,

- *detecting the presence of at least one of the plurality of network devices on the network by using a first communication protocol;* (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-22; col.4, lines 62-65; module 204, fig.2; Lautmann teaches of detecting the presence of a DLSw router (network device) on the network by receiving a registration message from the DLSw router. It can be interpreted that the protocol used to supply the information to the directory server is SNMP. It is well known in the art that the SNMP protocol can be used to supply information such as network address to the Network Management Server)

- *obtaining, by using the first communication protocol, from the detected network device, information related to the corresponding network device;* (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-23, lines 30-32; module 204, fig.2; Lautmann teaches of obtaining information related to the DLSw router such as the network address, number of packets transmitted/received, number of corrupted packets, etc. It can be interpreted that the protocol used to supply the information to the directory server is SNMP. It is well known in the art that the SNMP protocol can be used to supply information such as network address to the Network Management Server)

- *monitoring for issuance of an update message from the directory server indicating that a directory entry has been updated in the directory server;* (Lautmann, col.5, lines 38-46; module 330, fig.2; Lautmann teaches of waiting (monitoring) for update message from the directory service)

- *obtaining, in the case that an update message is issued, the updated directory entry from the directory server by using the second communication protocol;*

(Lautmann, col.5, lines 38-46; module 330, fig.2; Lautmann teaches of waiting (monitoring) for update message from the directory service)

- *extracting updated data from the updated directory entry; and* (Lautmann, col.5, lines 38-46, lines 65-67; module 330, fig.2; Lautmann teaches of waiting (monitoring) for update message from the directory service and processing the message)

- *sending the updated data to the network device which corresponds to the updated directory entry for placement into the information of the corresponding network device.* (Lautmann, col.5, lines 38-46, lines 65-67; module 330, fig.2; Lautmann teaches of waiting (monitoring) for update message from the directory service and processing the message)

However, Lautmann reference does not explicitly disclose,

- *formatting the obtained information into a directory entry; and*

- *sending the directory entry to a directory server by using a second communication protocol;*

Willie teaches,

- *formatting(invoking suitable functions) the obtained information into a directory entry (data module entry); and* (Willie, col.8, lines 6-18; module 68; fig.2)

- *sending the directory entry to a directory server (directory service 62) by using a second communication protocol (any distributed directory service, i.e. Novell Directory Services, LDAP);* (Willie, col.7, line 56 – col.8, line 2; col.8, lines 23-45; module 62, fig.2)

In summary, the Examiner maintains that Lautmann and Willie do disclose a method that manage a plurality of network devices by first detecting their presence and

obtaining related information using a first protocol; then, formatting (converting) the

obtained information and register it as a directory entry in the directory server; and

finally, monitoring for update message from the directory server, obtaining it, and

processing it. Therefore, the Applicants still failed to clearly disclose the novelty of

the invention and identify specific limitation, which would define patentable distinction

over prior art.

4.   With regard to *claims 26, 52, 78 and 104*, Lautmann reference does disclose,

- *detecting the presence of at least one of the plurality of network devices on the*

  network by using a first communication protocol; (Lautmann, col.1, line 61 –

  col.2, line 2; col.2, lines 63-65; col.3, lines 21-22; col.4, lines 62-65; module 204,

  fig.2; Lautmann teaches of detecting the presence of a DLSw router (network

  device) on the network by receiving a registration message from the DLSw

  router. It can be interpreted that the protocol used to supply the information to

  the directory server is SNMP. It is well known in the art that the SNMP protocol

  can be used to supply information such as network address to the Network

  Management Server)

- *obtaining, by using the first communication protocol, an information block from*

  each of the detected network devices, wherein the information block contains

  information related to the corresponding network device; (Lautmann, col.1, line

  61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-23, lines 30-32; module 204,

  fig.2; Lautmann teaches of obtaining information related to the DLSw router such

  as the network address, number of packets transmitted/received, number of

  corrupted packets, etc. It can be interpreted that the protocol used to supply the

information to the directory server is SNMP. It is well known in the art that the SNMP protocol can be used to supply information such as network address to the Network Management Server)

- *monitoring, by using the first protocol, each of the detected network devices for an update of the information in the information block of the network device;* (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-22; col.4, lines 62-65; module 204, fig.2; Lautmann teaches of detecting the presence of a DLSw router (network device) on the network by receiving a registration message from the DLSw router. It can be interpreted that the protocol used to supply the information to the directory server is SNMP. It is well known in the art that the SNMP protocol can be used to supply information such as network address to the Network Management Server)

- *obtaining, in the case that the information in the information block of one of the detected network devices has been updated, the updated information of the information block from the corresponding network device by using the first communication protocol, and sending the updated information to the directory server by using the second communication protocol for placement into the directory entry for the corresponding network device;* (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-23, lines 30-32; module 204, fig.2; Lautmann teaches of obtaining information related to the DLSw router such as the network address, number of packets transmitted/received, number of corrupted packets, etc. It can be interpreted that the protocol used to supply the information to the directory server is SNMP. It is well known in the art that the

SNMP protocol can be used to supply information such as network address to

the Network Management Server)

- *monitoring, by using a third communication protocol, for issuance of an update*

  message from the directory server indicating that a directory entry has been

  updated in the directory server; and (Lautmann, col.5, lines 38-46; module 330,

  fig.2; Lautmann teaches of waiting (monitoring) for update message from the

  directory service)

- *obtaining, in the case that an update message is issued, the updated directory*

  entry from the directory server by using the second communication protocol,

  extracting updated data from the updated directory entry, and sending the

  updated data to the network device which corresponds to the updated directory

  entry for placement into the information block of the corresponding network

  device. (Lautmann, col.5, lines 38-46; module 330, fig.2; Lautmann teaches of

  waiting (monitoring) for update message from the directory service)

However, Lautmann reference does not explicitly disclose,

- *formatting the obtained information into a directory entry; and*

- *sending the directory entry to a directory server by using a second*

  communication protocol;

Willie teaches,

- *formatting(invoking suitable functions) the obtained information into a directory*

  entry (data module entry); and (Willie, col.8, lines 6-18; module 68; fig.2)

- *sending the directory entry to a directory server (directory service 62) by using a*

  second communication protocol (any distributed directory service, i.e. Novell

Directory Services, LDAP); (Willie, col.7, line 56 – col.8, line 2; col.8, lines 23-45;

module 62, fig.2)

In summary, the Examiner maintains that Lautmann and Willie do disclose a method

that manage a plurality of network devices by first detecting their presence and

obtaining related information using a first protocol; then, formatting (converting) the

obtained information and register it as a directory entry in the directory server; and

finally, monitoring for update message from the directory server, obtaining it, and

processing it. Therefore, the Applicants still failed to clearly disclose the novelty of

the invention and identify specific limitation, which would define patentable distinction

over prior art.

5.   With regard to *claims 9, 11-13, 15-22, 35, 37-39, 41-48, 61, 63-65, 67-74, 87, 89-91 and*

93-100, their rejection is specified below.

Claim Rejections - 35 USC § 103

6.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

7.   *Claims 1-9, 11-13, 15-17, 19-22, 26-35, 37-39, 41-43, 45-48, 52-61, 63-65, 67-69, 71-*

74, 78-87, 89-91, 93-95, 97-100 and 104 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lautmann (US006560644B1) and in view of Willie et al.

(US006052724A).

8.   With regard to *claims 1, 27, 53 and 79*, Lautmann reference discloses,

- *detecting the presence of at least one of the plurality of network devices on the network by using a first communication protocol;* (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-22; col.4, lines 62-65; module 204, fig.2)

  Lautmann teaches of detecting the presence of a DLSw router (network device) on the network by receiving a registration message from the DLSw router. It can be interpreted that the protocol used to supply the information to the directory server is SNMP. It is well known in the art that the SNMP protocol can be used to supply information such as network address to the Network Management Server.

- *obtaining, by using the first communication protocol, from the detected network device, information related to the corresponding network device;* (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-23, lines 30-32; module 204, fig.2)

  Lautmann teaches of obtaining information related to the DLSw router such as the network address, number of packets transmitted/received, number of corrupted packets, etc. It can be interpreted that the protocol used to supply the information to the directory server is SNMP. It is well known in the art that the SNMP protocol can be used to supply information such as network address to the Network Management Server.

- *monitoring for issuance of an update message from the directory server indicating that a directory entry has been updated in the directory server;* (Lautmann, col.5, lines 38-46; module 330, fig.2)

Lautmann teaches of waiting (monitoring) for update message from the directory service.

- *obtaining, in the case that an update message is issued, the updated directory entry from the directory server by using the second communication protocol;* (Lautmann, col.5, lines 38-46; module 330, fig.2)

  Lautmann teaches of waiting (monitoring) for update message from the directory service.

- *extracting updated data from the updated directory entry; and* (Lautmann, col.5, lines 38-46, lines 65-67; module 330, fig.2)

  Lautmann teaches of waiting (monitoring) for update message from the directory service and processing the message.

- *sending the updated data to the network device which corresponds to the updated directory entry for placement into the information of the corresponding network device.* (Lautmann, col.5, lines 38-46, lines 65-67; module 330, fig.2)

  Lautmann teaches of waiting (monitoring) for update message from the directory service and processing the message.

However, Lautmann reference does not explicitly disclose,

- *formatting the obtained information into a directory entry; and*

- *sending the directory entry to a directory server by using a second communication protocol;*

Willie teaches,

- *formatting (invoking suitable functions) the obtained information into a directory entry (data module entry); and* (Willie, col.8, lines 6-18; module 68; fig.2)

- *sending the directory entry to a directory server (directory service 62) by using a second communication protocol (any distributed directory service, i.e. Novell Directory Services, LDAP);* (Willie, col.7, line 56 – col.8, line 2; col.8, lines 23-45; module 62, fig.2)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Willie reference with Lautmann reference to enable for managing a distributed directory service which uses standard management protocols to generate notifications of events occurring within the distributed service. Furthermore, Lautmann and Willie do disclose a method that manage a plurality of network devices by first detecting their presence and obtaining related information using a first protocol; then, formatting (converting) the obtained information and register it as a directory entry in the directory server; and finally, monitoring for update message from the directory server, obtaining it, and processing it.

9.   With regard to *claims 2-3, 28-29, 54-55 and 80-81*, Lautmann and Willie references disclose the invention substantially as claimed,

See *claims 1, 27, 53 and 79* rejection as detailed above.

Furthermore, Lautmann and Willie references disclose,

- *wherein the first communication protocol is a network management protocol.* (Lautmann, col.1, lines 61-65; col.1, line 67 – col.2, line 2; col.2, lines 63-65; Willie, col.2, lines 24-51; col.3, lines 3-9)

- *wherein the first communication protocol is SNMP.* (Lautmann, col.1, lines 61-65; col.1, line 67 – col.2, line 2; col.2, lines 63-65; Willie, col.2, lines 24-51; col.3, lines 3-9)

10.   With regard to *claims 4-6, 30-32, 56-58 and 82-84*, Lautmann and Willie references disclose the invention substantially as claimed,

See *claims 1, 27, 53 and 79* rejection as detailed above.

Furthermore, Lautmann and Willie references disclose,

- *wherein the second communication protocol is a directory-based protocol.* (Willie, col.7, line 56 - col.8, line 2; col.8, lines 23-45; module 62, fig.2)

- *wherein the second communication protocol is Lightweight Directory Access Protocol.* (Lautmann, col.3, lines 19-28; col.6, lines 21-46, lines 47-63; col.7, lines 1-16, lines 42-45)

- *wherein the second communication protocol is x.500 directory protocol.* (Lautmann, col.3, lines 19-28; col.6, lines 21-46, lines 47-63; col.7, lines 1-16, lines 42-45)

11.   With regard to *claims 7-8, 33-34, 59-60 and 85-86*, Lautmann and Willie references disclose the invention substantially as claimed,

See *claims 1, 27, 53 and 79* rejection as detailed above.

Furthermore, Lautmann and Willie references disclose,

- *sending a broadcast query message in the first communication protocol; and* (Lautmann, col.1, lines 61-65; col.1, line 67 – col.2, line 2; col.2, lines 63-65)

- receiving a reply message in the first communication protocol from each of the plurality of network devices that supports the first communication protocol, (Lautmann, col.1, lines 61-65; col.1, line 67 – col.2, line 2; col.2, lines 63-65)

- wherein, the reply message contains network identification information related to the corresponding network device that sent the reply message. (Lautmann, col.1, lines 61-65; col.1, line 67 – col.2, line 2; col.2, lines 63-65)

12.   With regard to _claims 9, 35, 61 and 87_, Lautmann and Willie references disclose the invention substantially as claimed,

See _claims 1, 27, 53 and 79_ rejection as detailed above.

Furthermore, Lautmann and Willie references disclose,

- _wherein the information from each detected network device contains network-related information, feature information and status information for the corresponding network device._ (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-23, lines 30-32; module 204, fig.2)

Lautmann clearly teaches of obtaining information related to the DLSw router (i.e. network device) such as the network address, number of packets transmitted/received, number of corrupted packets, etc. It can be interpreted that the protocol used to supply the information to the directory server is SNMP. It is well known in the art that the SNMP protocol can be used to supply information such as network address, data rate in bytes per second or packets per second, etc. to the Network Management Server.

13.   With regard to *claims 11, 37, 63 and 89*, Lautmann and Willie references disclose the

invention substantially as claimed,

> See *claims 1, 27, 53 and 79* rejection as detailed above.

> Furthermore, Lautmann and Willie references disclose,

> - *wherein each directory entry is formatted according to a standardized schema*
>   *and a schema extension.* (Willie, col.7, lines 56-57; col.8, lines 6-18; module 68;
>   fig.2)

> Willie teaches of formatting the obtained information into a data module in the

> *"directory service, and preferably comprises a distributed directory service"*

> (col.7, lines 56-57) such as Novell Directory Services (NDS). Furthermore,

> according to Willie, the interfacing between the two information protocols is done

> *"by directly invoking suitable functions in data module, or indirectly through, for*

> *example, an application programming interface (API)"* (col.8, lines 7-9) *"as long*

> *as API is also modified to properly interface with data module"* (col.8, lines 14-

> 15).

14.   With regard to *claims 12-13, 38-39, 64-65 and 90-91*, Lautmann and Willie references

disclose the invention substantially as claimed,

> See *claims 1, 27, 53 and 79* rejection as detailed above.

> Furthermore, Lautmann and Willie references disclose,

> - *wherein the step of sending each directory entry to the directory server includes*
>   *sending an entry-addition message in the second communication protocol to the*
>   *directory server for each directory entry, wherein each entry-addition message*

contains the corresponding directory entry. (Willie, col.7, lines 56-57; col.8, lines 6-18; module 68; fig.2)

- *wherein, in the case that an error message is received from the directory server in response to the entry-addition message which indicates that a directory entry already exists for the corresponding network device, an entry-modify message in the second communication protocol is sent to the directory server to replace the directory entry for the corresponding network device.* (Willie, col.7, lines 56-57; col.8, lines 6-18; module 68; fig.2)

Willie teaches of formatting the obtained information into a data module in the *"directory service, and preferably comprises a distributed directory service"* (col.7, lines 56-57) such as Novell Directory Services (NDS). Furthermore, according to Willie, the interfacing between the two information protocols is done *"by directly invoking suitable functions in data module, or indirectly through, for example, an application programming interface (API)"* (col.8, lines 7-9) *"as long as API is also modified to properly interface with data module"* (col.8, lines 14-15). Thus, Willie teaches of both adding and modifying entries in response to their respective instructions.

15.   With regard to *claims 15, 41, 67 and 93*, Lautmann and Willie references disclose the invention substantially as claimed,

See *claims 1, 27, 53 and 79* rejection as detailed above.

Furthermore, Lautmann and Willie references disclose,

- *monitoring, by using the first communication protocol, each of the detected network devices for an update of the information of the network device;* (Lautmann, col.5, lines 38-46; module 330, fig.2)

  Lautmann teaches of waiting (monitoring) for update message from the directory service.

- *obtaining, in the case that the information of one of the detected network devices has been updated, the updated information from the corresponding network device by using the first communication protocol; and* (Lautmann, col.5, lines 38-46; module 330, fig.2)

  Lautmann teaches of waiting (monitoring) for update message from the directory service.

- *sending the updated information to the directory server by using the second communication protocol for placement into the directory entry for the corresponding network device.* (Lautmann, col.5, lines 38-46, lines 65-67; module 330, fig.2)

  Lautmann teaches of waiting (monitoring) for update message from the directory service and processing the message.

16.   With regard to *claims 16, 42, 68 and 94*, Lautmann and Willie references disclose the invention substantially as claimed,

　　See *claims 1, 27, 53 and 79* rejection as detailed above.

　　Furthermore, Lautmann and Willie references disclose,

- *sending, on a frequent basis, a change query message in the first communication protocol to each detected network device; and*

- *receiving a change indication message in the first communication protocol, in reply to one of the change query messages, from each detected network device in which the information block has changed.* (Lautmann, col.5, lines 16-30, lines 38-46; module 330, fig.2)

Lautmann teaches of waiting (monitoring) for update message from the directory service. Specifically, Lautmann states that *"there are plurality of different types of events which can lead to update of information within the directory service include: expiration of a timer within the directory service, stimulating the server to transmit an inquiry message to the router (i.e. network device), and the router responding to the inquiry message"* (col.5, lines 17-23).

17.   With regard to *claims 17, 21, 43, 47, 69, 73, 95 and 99*, Lautmann and Willie references disclose the invention substantially as claimed,

See *claims 1, 27, 53 and 79* rejection as detailed above.

Furthermore, Lautmann and Willie references disclose,

- *sending an information request message in the first communication protocol to each detected network device for which a change indication message was received; and*

- *receiving an information response message in the first communication protocol from each detected network device to which an information request message was sent, the information response message containing the information from the corresponding detected network device, wherein the information request message contains the network identification information related to the*

corresponding detected network device. (Lautmann, col.5, lines 16-30, lines 38-46; module 330, fig.2)

Lautmann teaches of obtaining update message from the directory service. Specifically, Lautmann states that as *"new information becoming available to the router such as loss of contact with a neighbor router ... [then] ... transmit the new information to the directory service"* (col.5, lines 23-27) in respond to the inquiry messages.

18.   With regard to *claims 19-20, 22, 45-46, 48, 71-72, 74, 97-98 and 100*, Lautmann and Willie references disclose the invention substantially as claimed,

See *claims 1, 27, 53 and 79* rejection as detailed above.

Furthermore, Lautmann and Willie references disclose,

- *monitoring the network for issuance of a multicast message which indicates the identity of a directory entry that has been updated in the directory server.* (Lautmann, col.5, lines 16-30, lines 38-46; module 330, fig.2) Lautmann teaches of waiting (monitoring) for update message from the directory service. Specifically, Lautmann states that *"there are plurality of different types of events which can lead to update of information within the directory service include: expiration of a timer within the directory service, stimulating the server to transmit an inquiry message to the router (i.e. network device), and the router responding to the inquiry message"* (col.5, lines 17-23).

19.   With regard to *claims 26, 52, 78 and 104*, Lautmann reference does disclose,

- *detecting the presence of at least one of the plurality of network devices on the network by using a first communication protocol;* (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-22; col.4, lines 62-65; module 204, fig.2; Lautmann teaches of detecting the presence of a DLSw router (network device) on the network by receiving a registration message from the DLSw router. It can be interpreted that the protocol used to supply the information to the directory server is SNMP. It is well known in the art that the SNMP protocol can be used to supply information such as network address to the Network Management Server)

- *obtaining, by using the first communication protocol, an information block from each of the detected network devices, wherein the information block contains information related to the corresponding network device;* (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-23, lines 30-32; module 204, fig.2; Lautmann teaches of obtaining information related to the DLSw router such as the network address, number of packets transmitted/received, number of corrupted packets, etc. It can be interpreted that the protocol used to supply the information to the directory server is SNMP. It is well known in the art that the SNMP protocol can be used to supply information such as network address to the Network Management Server)

- *monitoring, by using the first protocol, each of the detected network devices for an update of the information in the information block of the network device;* (Lautmann, col.1, line 61 – col.2, line 2; col.2, lines 63-65; col.3, lines 21-22; col.4, lines 62-65; module 204, fig.2; Lautmann teaches of detecting the presence of a DLSw router (network device) on the network by receiving a

registration message from the DLSw router. It can be interpreted that the

protocol used to supply the information to the directory server is SNMP. It is well

known in the art that the SNMP protocol can be used to supply information such

as network address to the Network Management Server)

- *obtaining, in the case that the information in the information block of one of the*

  detected network devices has been updated, the updated information of the

  information block from the corresponding network device by using the first

  communication protocol, and sending the updated information to the directory

  server by using the second communication protocol for placement into the

  directory entry for the corresponding network device; (Lautmann, col.1, line 61 –

  col.2, line 2; col.2, lines 63-65; col.3, lines 21-23, lines 30-32; module 204, fig.2;

  Lautmann teaches of obtaining information related to the DLSw router such as

  the network address, number of packets transmitted/received, number of

  corrupted packets, etc. It can be interpreted that the protocol used to supply the

  information to the directory server is SNMP. It is well known in the art that the

  SNMP protocol can be used to supply information such as network address to

  the Network Management Server)

- *monitoring, by using a third communication protocol, for issuance of an update*

  message from the directory server indicating that a directory entry has been

  updated in the directory server; and (Lautmann, col.5, lines 38-46; module 330,

  fig.2; Lautmann teaches of waiting (monitoring) for update message from the

  directory service)

- *obtaining, in the case that an update message is issued, the updated directory*

  entry from the directory server by using the second communication protocol,

extracting updated data from the updated directory entry, and sending the

updated data to the network device which corresponds to the updated directory

entry for placement into the information block of the corresponding network

device. (Lautmann, col.5, lines 38-46; module 330, fig.2; Lautmann teaches of

waiting (monitoring) for update message from the directory service)

However, Lautmann reference does not explicitly disclose,

- *formatting the obtained information into a directory entry; and*

- *sending the directory entry to a directory server by using a second*

  communication protocol;

Willie teaches,

- *formatting(invoking suitable functions) the obtained information into a directory*

  entry (data module entry); and (Willie, col.8, lines 6-18; module 68; fig.2)

- *sending the directory entry to a directory server (directory service 62) by using a*

  second communication protocol (any distributed directory service, i.e. Novell

  Directory Services, LDAP); (Willie, col.7, line 56 – col.8, line 2; col.8, lines 23-45;*

  module 62, fig.2)

In summary, the Examiner maintains that Lautmann and Willie do disclose a method

that manage a plurality of network devices by first detecting their presence and

obtaining related information using a first protocol; then, formatting (converting) the

obtained information and register it as a directory entry in the directory server; and

finally, monitoring for update message from the directory server, obtaining it, and

processing it. Therefore, the Applicants still failed to clearly disclose the novelty of

the invention and identify specific limitation, which would define patentable distinction

over prior art.

Allowable Subject Matter

20.   *Claims 10, 14, 23-25, 36, 40, 49-51, 62, 66, 75-77, 88, 92 and 101-103* are objected to

as being dependent upon a rejected base claim, but would be allowable if rewritten in

independent form including all of the limitations of the base claim and any intervening

claims.

Conclusion

21.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.

22.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Thomas Duong whose telephone number is 571/272-3911. The

examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the

examiner by telephone are unsuccessful, the examiner's supervisor, Jack B Harvey can

be reached on 571/272-3896. The fax phone numbers for the organization where this

application or proceeding is assigned are 703/872-9306 for regular communications and

703/872-9306 for After Final communications. Any inquiry of a general nature or relating

to the status of this application or proceeding should be directed to the receptionist

whose telephone number is 571/272-2100.

Thomas Duong (AU2145)

January 10, 2005

JACK B. HARVEY
SUPERVISORY PATENT EXAMINER